ISSN 0143-2885

International Endodontic Journal

The Official Journal of
British Endodontic Society
European Society of Endodontology
Flemish Society of Endodontology
Irish Endodontic Society
Netherlands Society for Endodontology
Portuguese Society of Endodontology

Editor
P. M. H. DUMMER

Associate Editors
J. L. GUTMANN
P. R. WESSELINK

VOLUME 33, 2000

Volume Contents

b
Blackwell
Science

Published by Blackwell Science
Editorial Offices:

Blackwell Science Ltd
23 Ainslie Place, Edinburgh EH3 6AJ, UK

Blackwell Science Ltd
25 John Street, London WC1N 2BL, UK

Blackwell Science Ltd
Osney Mead, Oxford OX2 OEL, UK

Blackwell Science Asia Pty
54 University Street, (PO Box 378), Carlton South, Victoria 3053, Australia

Blackwell Science Europe Ltd
10 rue Casimir Delavigne, F-75006 Paris, France

Blackwell Wissenschafts Verlag GmbH
Kurfürstendamm 57, D-10707 Berlin, Germany

Blackwell Science KK
MG Kodemnacho Building, 7–10 Kodenmacho Nihombashi, Chuo-ku, Tokyo, Japan

Blackwell Science Inc.
Suite 500, 5th Floor, 238 Main Street, Cambridge, MA 012142, USA

© 2000 Blackwell Science Ltd. Authorisation to photocopy for internal or personal use or the internal or personal use of specific clients is granted by Blackwell Science Ltd for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of $15.00 per copy is paid directly to the CCC, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor: 0143-2 885/00; $15.00.

The Blackwell Science logo is a trade mark of Blackwell Science Ltd registered at the United Kingdom Trade Marks Registry.

Typeset by Graphicraft Limited, Hong Kong
Printed by Bell & Bain Ltd, Glasgow, UK

Number 1 January 2000

Review Article

1 *C. A. Murray & W. P. Saunders:* Root canal treatment and general health: a review of the literature

Original Articles

19 *J. M. Whitworth & E. M. Boursin:* Dissolution of root canal sealer cements in volatile solvents

25 *W. A. De Almeida, M. R. Leonardo, M. Tanomaru Filho & L. A. B. Silva:* Evaluation of apical sealing of three endodontic sealers

28 *L. B. Peters, P. R. Wesselink & W. R. Moorer:* Penetration of bacteria in bovine root dentine *in vitro*

37 *D. E. Witherspoon & J. L. Gutmann:* Analysis of the healing response to gutta-percha and Diaket when used as root-end filling materials in periradicular surgery

46 *R. Di Lenarda, M. Cadenaro & O. Sbaizero:* Effectiveness of 1 mol L^{-1} citric acid and 15% EDTA irrigation on smear layer removal

53 *O. Peters, T. N. Göhring & F. Lutz:* Effect of eugenol-containing sealer on marginal adaptation of dentine-bonded resin fillings

60 *N. Katebzadeh, A. Sigurdsson & M. Trope:* Radiographic evaluation of periapical healing after obturation of infected root canal : an *in vivo* study.

Clinical Article

67 *M. A. A. De Bruyne, R. J. G. De Moor & F. M. Raes:* Necrosis of the gingiva caused by calcium hydroxide: a case report

Poster Abstracts

72 1999 Spring scientific meeting of the British Endodontic Society

Book Review

78 *Face Pain – A guide for patients and carers*

Resource Review

79 Multi-Media CD-Rom – Cleaning and Shaping

Meeting Report

80 *T. P. Pitt Ford:* ESE Congress in Zagreb

Endodontic News and Calendar of Events

81 International Endodontic News

85 Calendar of Events

87 Erratum

88 Instructions to authors

Number 2 March 2000

Original Articles

91 *M. L. Zuolo, M. O. F. Ferreira & J. L. Gutmann:* Prognosis in periradicular surgery: a clinical prospective study

99 *P. R. Moreira, D. F. M. Santos, R. D. Martins & R. S. Gomez:* $CD57^{+}$ cells in radicular cyst

103 *K. Fernando, K. Gulabivala & A. W. Barrett:* The preparation of periapical lesions for flow cytometry

113 *R. J. G. De Moor, G. M. G. Hommez, J. G. De Boever, K. I. M. Delmé & G. E. I. Martens:* Periapical health related to the quality of root canal treatment in a Belgian population

121 *M.-K. Wu, B. Fan & P. R. Wesselink:* Diminished leakage along root canals filled with gutta-percha without sealer over time: a laboratory study

© 2000 Blackwell Science Ltd

126 *H. K. Haapasalo, E. K. Sirén, T. M. T. Waltimo, D. Ørstavik & M. P. P. Haapasalo:* Inactivation of local root canal medicaments by dentine: an *in vitro* study

132 *M. G. Khabbaz, P. L. Anastasiadis & S. N. Sykaras:* Determination of endotoxins in caries: association with pulpal pain

Case Report

138 *L. R. G. Fava, I. Weinfeld, F. P. Fabri & C. R. Pais:* Four second molars with single roots and single canals in the same patient

Research Abstracts

143 ESE Research Abstracts presented at the 9th ESE Congress in Zagreb

Endodontic News and Calendar of Events

170 Endodontic News and Calendar of Events

Number 3 May 2000

Important Announcement for all *IEJ* Readers

Review Articles

173 *Y. Kimura, P. Wilder-Smith & K. Matsumoto:* Lasers in endodontics: a review

186 *M. Hülsmann & W. Hahn:* Complications during root canal irrigation – literature review and case reports

Original Articles

194 *A. L. Bate, J. K-C. Ma & T. R. Pitt Ford:* Detection of bacterial virulence genes associated with infective endocarditis in infected root canals

204 *G. M. Yared, F. E. Bou Dagher & P. Machtou:* Cyclic fatigue of ProFile rotary instruments after clinical use

208 *S. Aryanpour, J.-P. Van Nieuwenhuysen & W. D'Hoore:* Endodontic retreatment decisions: no consensus

219 *R. Weiger, C. Rosendahl & C. Lõst:* Influence of calcium hydroxide intracanal dressings on the prognosis of teeth with endodontically induced periapical lesions

227 *S. T. Kim, P. V. Abbott & P. McGinley:* The effects of Ledermix paste on discolouration of mature teeth

233 *S. T. Kim, P. V. Abbott & P. McGinley:* The effects of Ledermix paste on discolouration of immature teeth

238 *M. J. Larsen & P. Hörsted-Bindslev:* A laboratory study evaluating the release of hydroxyl ions from various calcium hydroxide products in narrow root canal-like tubes

243 *K. Lyroudia, O. Pantelidou, G. Mikrogeorgis, C. Chatzikallinikidis, N. Nikopoulos & I. Pitas:* The use of 3D computerized reconstruction for the study of coronal microleakage

248 *S. A. Thompson & P. M. H. Dummer:* Shaping ability of Hero 642 rotary nickel–titanium instruments in simulated root canals: Part 1

255 *S. A. Thompson & P. M. H. Dummer:* Shaping ability of Hero 642 rotary nickel–titanium instruments in simulated root canals: Part 2

262 *P. J. Lumley:* Cleaning efficacy of two apical preparation regimens following shaping with hand files of greater taper

266 *C. Goya, R. Yamazaki, Y. Tomita, Y. Kimura & K. Matsumoto:* Effects of pulsed Nd:YAG laser irradiation on smear layer at the apical stop and apical leakage after obturation

272 *M. B. Saunders , K. Gulabivala , R. Holt & R. S. Kahan:* Reliability of radiographic observations recorded on a proforma measured using inter- and intra-observer variation: a preliminary study

279 *J. S. Rhodes, T. R. Pitt Ford, J. A. Lynch, P. J. Liepins & R. V. Curtis:* A comparison of two nickel–titanium instrumentation techniques in teeth using microcomputed tomography

© 2000 Blackwell Science Ltd

Case Report

286 *J. M. Whitworth:* Apparent periapical repair without operative intervention: a case report and discussion

Research Abstracts

290 2000 Spring Scientific Meeting of the British Endodontic Society

Book Review

293 *T. Kvist:* Practical Lessons in Endodontic Surgery by D. E. Arens, in collaboration with M. Torabinejad, N. Chivian & R. Rubinstein

294 Endodontic News and Calendar of Events

Number 4 August 2000

Review Article

297 *S. A. Thompson:* An overview of nickel–titanium alloys used in dentistry

Orginal Articles

311 *C. D. Laghios, B. W. Benson, J. L. Gutmann & C. W. Cutler:* Comparative radiopacity of tetracalcium phosphate and other root-end filling materials

316 *M. F. Ahmed, A. I. Elseed & Y. E. Ibrahim:* Root canal treatment in general practice in Sudan

320 *J. T. Marais:* Cleaning efficacy of a new root canal irrigation solution: a preliminary evaluation

326 *J. J. P. Mc Cullagh, D. J. Setchell, K. Gulabivala, D. L. Hussey, P. Biagioni, P.-J. Lamey & G. Bailey:* A comparison of thermocouple and infrared thermographic analysis of temperature rise on the root surface during the continuous wave of condensation technique

333 *C. D. Laghios, C. W. Cutler & J. L. Gutmann: In vitro* evidence that lipopolysaccharide of an oral pathogen leaks from root-end filled teeth

340 *M.-K. Wu, A. R. Özok & P. R. Wesselink:* Sealer distribution in root canals obturated by three techniques

346 *I. T. Griffiths, S. T. Bryant & P. M. H. Dummer:* Canal shapes produced sequentially during instrumentation with Quantec LX rotary nickel–titanium instruments: a study in simulated canals

355 *J. A. von Fraunhofer, D. K. Fagundes, N. J. McDonald & T. C. Dumsha:* The effect of root canal preparation on microleakage within endodontically treated teeth: an *in vitro* study

361 *N. Imura, A. S. Kato, G.-I. Hata, M. Uemura, T. Toda & F. Weine:* A comparison of the relative efficacies of four hand and rotary instrumentation techniques during endodontic retreatment

367 *A. M. M. Kamal, T. Okiji & H. Suda:* Response of class II molecule-expressing cells and macrophages to cavity preparation and restoration with 4-META/MMA-TBB resin

374 *T. Tamarut, M. Kovaɪevi3 & I. Uhaɪ:* Detection of a transitional ion concentration zone during electronic measurement of root canal length: a study *in vitro*

381 *S. J. Jardine & K. Gulabivala:* An *in vitro* comparison of canal preparation using two automated rotary nickel–titanium instrumentation techniques

392 *R. Nance, D. Tyndall, L. G. Levin & M. Trope:* Identification of root canals in molars by tuned-aperture computed tomography

Case Report

397 *M. Ferrari & F. Mannocci:* A 'one-bottle' adhesive system for bonding a fibre post into a root canal: an SEM evaluation of the post–resin interface

401 Endodontic News and Calendar of Events

© 2000 Blackwell Science Ltd

Number 5 September 2000

Original Articles

405 *R. M. Al Shalabi, O. E. Omer, J. Glennon, M. Jennings & N. M. Claffey:* Root canal anatomy of maxillary first and second permanent molars

415 *R. M. P. Gilhooly, S. J. Hayes, S. T. Bryant & P. M. H. Dummer:* Comparison of cold lateral condensation and a warm multiphase gutta-percha technique for obturating curved root canals

421 *A. Jaunberzins, J. L. Gutmann, D. E. Witherspoon & R. P. Harper:* TGF-b1 alone and in combination with calcium hydroxide is synergistic to TGF-b1 production by osteoblasts *in vitro*

427 *E. V. Cruz, M. E. M. Jimena, E. G. Puzon & M. Iwaku:* Endodontic teaching in Philippine dental schools

435 *J. M. Whitworth, G. V. Seccombe, K. Shoker & J. G. Steele:* Use of rubber dam and irrigant selection in UK general dental practice

442 *B. E. Kells, J. G. Kennedy, P. A. Biagioni & P. J. Lamey:* Computerized infrared thermographic imaging and pulpal blood flow: Part 1. A protocol for thermal imaging of human teeth

448 *B. E. Kells, J. G. Kennedy, P. A. Biagioni & P. J. Lamey:* Computerized infrared thermographic imaging and pulpal blood flow: Part 2. Rewarming of healthy human teeth following a controlled cold stimulus

463 *C. M. Bramante & L. V. Betti:* Efficacy of Quantec rotary instruments for gutta-percha removal

Case Reports

468 *Y. Kimura & K. Matsumoto:* Mandibular first molar with three distal root canals

471 *I. Fristad, S. O. Hagen, A. Bårdsen & O. Molven:* Lateral breakdown of nonendodontic origin adjacent to maxillary left incisors

Resource Review

475 Multi-Media CD-ROM – One-Visit Endodontic Treatment

477 Endodontic News and Calendar of Events

Number 6 November 2000

Editorial

481 *P. M. H. Dummer:* Editorial

Original Articles

483 *M. Laux, P. V. Abbott, G. Pajarola & P. N. R. Nair:* Apical inflammatory root resorption: a correlative radiographic and histological assessment

494 *A. M. Solovyeva & P. M. H. Dummer:* Cleaning effectiveness of root canal irrigation with electrochemically activated anolyte and catholyte solutions: a pilot study

505 *H.-M. Tang, H. Nordbö & L. K. Bakland:* Pulpal response to prolonged dentinal exposure to sodium hypochlorite

509 *L.-L. Kirkevang, D. Ørstavik, P. Hörsted-Bindslev & A. Wenzel:* Periapical status and quality of root fillings and coronal restorations in a Danish population

Clinical Section

516 *L. S. Buchanan:* The standardized-taper root canal preparation – Part 1. Concepts for variably tapered shaping instruments

530 *P. Wood & J. S. Rees:* An unusual case of furcation external resorption

534 Endodontic News and Calendar of Events

540 Author Index/Keyword Index

Volume Contents

© 2000 Blackwell Science Ltd